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ABSTRACT

Through further implementation of distance education, Chinese Taipei may both continue and increase its economic development. The benefits of lifelong learning have been demonstrated in the past 30 years by the economic growth and labor force skills development in Chinese Taipei. The founding of the National Open University, in 1986, with its increased diversity and flexibility, has played a key role in this growth. Since its founding, the University has enhanced access to high quality education, developed degree granting programs, and increased its number of academic departments. Participation rates have been high, with the majority of students being women, older adults, and non-business sector workers. Public support has also been high, with the greatest demand among women, senior citizens, the handicapped, and rural inhabitants. This increased demand has resulted in new, beneficial educational policies. In efforts to increase accessibility, the Open University has eliminated its entrance exam requirement, and additional universities are being established in Taipei and Kaohsiung. Competition from these new universities, as well as from traditional universities, will result in improvements in student services. In order for success, however, distance learning must incorporate more effective, adult-based delivery and evaluation tools. Hopefully, greater acceptance for distance learning from employers will be achieved as graduates demonstrate success in all walks of life. (YKH)

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Distance Education: A Key Strategy for Lifelong Learning in Chinese Taipei

Judy Huang

In: Lifelong Learning: Policies, Practices, and Programs

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Distance Education: A Key Strategy for Lifelong Learning in Chinese Taipei

by Judy Huang

In this era of advanced technology and with the explosion of the information age, lifelong learning has become a requisite for full-time employment. In Chinese Taipei, distance education may be the most important vehicle for the delivery of formal, vocationally-oriented lifelong learning. It is open, cost-effective, moderately uncomplicated to establish, and minimizes the bureaucracy typically associated with fixed institutions. Changes in distance education within Chinese Taipei during the past decade have been profound, and include the establishment of the Open University in 1986, the subsequent development of degree programs, the creation of new open universities in Taipei and Kaohsiung, and the development of distance education programs within the community of established and traditional universities. The future for lifelong learning in Chinese Taipei appears bright, in large measure related to the successful implementation of distance education as a tool for broad workforce development. Further, with the aid of distance education, the striking economic development enjoyed by Chinese Taipei during the past thirty years may well be replicated during the course of the next three decades.

INTRODUCTION

In every corner of the globe, in developed and developing economies alike, and in every facet of their daily lives, people are increasingly dependent on information. At the same time, the world's storehouse of information is increasing, at an accelerating rate. Given this dependency on knowledge coupled with the tremendous expansion in the sheer quantity of information, it has become critical for every working adult to accumulate educational capital throughout the lifespan. Not so long ago, workers were trained once; now, workers are trained, re-trained and trained again. As well as the benefits that accrue to individuals who learn throughout the course of their lives, the economic benefits for the society as a whole are enormous. Thus the nature and value of individual educational development is clearly and openly intertwined with societal benefits accruing from broad economic development. Given the nature of Chinese Taipei society, this symbiotic unfolding is highly significant.

Lifelong learning is inclusive. In this regard it is markedly different for several reasons than its much smaller subset, the school-age learning experience. Lifelong

learning includes experiences that range from the very general and theoretical, through to the applied and pragmatic. It also deals with the vocational and the avocational, from birth to death. In effect, it is the total sum of experiences that affect an individual's behaviour and abilities throughout a lifetime. Clearly, the avocational side of lifelong learning, if indeed it can be segregated, does not fit even as an extension within the conventional school setting. Small overlaps aside, they are for the most part quite different sets of experiences, including context, goals, motivations, supporting environments, and learning modes. But what of the ongoing vocational element of lifelong learning? Is it merely an extension of what and how we learned as full-time students in elementary, secondary and so-called tertiary education? In fact, the characteristics associated with lifelong vocational education, and this includes the curricula, the goals, the methods, and the institutions such as they are, must be by design and need considerably different. Simply put, conventional colleges and universities and the associated systems are not adequately equipped to respond to all the vocational training needs of a learning society.

In Chinese Taipei and elsewhere, the number of traditional colleges and universities and the available seats within these schools are inadequate to meet the educational and vocational training needs of adults. However, even if the quantity issue was resolved, the design of traditional college and university schooling is conceptually limited, and has as its primary foundation and method of teaching a focus on younger adults. Older learners are not attracted to and do not learn effectively in this type of environment. As well, conventional colleges and universities seldom teach applied, practical knowledge that relates to on-the-job skills. In no small measure this is a reflection of the limited job experience of most teachers working within this system. More significantly, conventional colleges and universities are limited in location and time, making it impossible for working adults, the rural population, and disadvantaged groups to access these institutions. Adults need an educational system that has the flexibility and diversity, including breadth and depth, to provide advanced education for everyone. The most obvious and effective solution is distance education.

DISTANCE EDUCATION

Distance education has became an important and meaningful element of higher education systems in many developed economies. Perhaps the most well-known example of tertiary level distance education is the United Kingdom's Open University. However, distance education has also caught on in the Netherlands, Canada, Sir Lanka and many other countries. Following are reasons why distance education has become so wide-spread, and is seen by many educators in Chinese Taipei as critical for the ongoing development of a seamless system of lifelong learning in this economy.

Distance education transcends the conventional barriers of location and time. It reflects characteristics of openness and continuity, and compared with fixed institutions can be expanded or contracted with relative ease. Adults find the delivery method to be fitting and relevant, perhaps the best model for acquiring a variety of specialized knowledge and skills at different times for diverse purposes throughout

the lifespan. There is no need to leave full-time employment, no need to take large amounts of time away from the family or leisure pursuits, and no need to travel long distances according to fixed schedules. Similarly, the elaborate bureaucracies associated with traditional schooling are minimized and registration is simple, particularly where an open admissions policy is in place.

The number of places in conventional colleges and universities and school systems will always be limited, reflecting in part the fixed capacities of the campus and the faculty. Developmental and operational costs associated with conventional colleges and universities are high. By comparison, distance education has lower start-up costs, and much lower operational costs. With "campus-free" distance education, variable costs, once the system is operational, tend to be flat. That is, beyond a relatively small number of students, the costs per student are the same or slightly less. The increasing use of technology to broaden the scope of distance education has great potential for further reducing costs per student. In Chinese Taipei, the distance education-based National Open University, with its budget of NT$800,000,000, accommodates approximately 30,000 adult students each year. By comparison, the National Taiwan University, one of the larger universities in Chinese Taipei, has an annual budget of $NT3,500,000,000 for its 21,000 students (Ministry of Education, 1996). Though gross numbers of this sort beg some level of refinement, the differential costs remain substantial and manifest.

During the past decade, distance education in Chinese Taipei has gained some measure of acceptance from the public and considerable confidence has been expressed by the government. Research done by Hsieh (1996) on the economics of distance education supports the conclusion that it has had a very positive influence on labour force skills development and economic growth. As a result, distance education has been identified by the government as a key tool on the Chinese Taipei human resource agenda. During the next three decades it is expected that distance education will be one of the fundamental instruments for developing and re-developing vocational and technical skills throughout the economy, thereby keeping the workforce skilled to a level of competitiveness that will build on the already substantial economic development witnessed during the past thirty years. There is no doubt that within Chinese Taipei, distance education is a key strategy for supporting the broader lifelong learning context.

THE DEVELOPMENT OF DISTANCE EDUCATION

To appreciate the role of distance education in Chinese Taipei, it is necessary to at least touch on the recent and broader evolution of the society because the development of distance education interrelates directly and conspicuously with significant social and economic changes. The following section of this paper discusses this development in two parts. First, the relationship between Chinese Taipei society and distance education is examined. Second, the history of specific distance education institutions is detailed.

Chinese Taipei Society and Distance Education

In the following paragraphs, three historical time periods are used to frame the

development of distance education as Chinese Taipei society evolved both socially and economically.

From about 1949 to the mid 1960s, Chinese Taipei was recovering from conflict. The strong economic growth seen in the late 1960s was yet to emerge, and the broader society was showing only moderate signs of what was to be an exceptional transformation. During this period, production was tied closely to natural resources, while farming, fishing, forestry and animal husbandry constituted the mainstays of the economy. As a consequence, educational attainment for the majority of the population was limited to elementary and secondary education. During this period the literacy rate hovered at a respectable but not lofty 67% (all percentages are rounded to the nearest whole number), and average annual personal income was around US$2,800. In order to dramatically improve the general welfare of society, the government not only strongly sought to restructure economic production, but also implemented a coherent and broad-based educational system by building new schools for all levels of learners and establishing a specialized educational broadcasting system as well as correspondence schools. The effort to remedy the shortcomings of the school system of the day quite fortuitously laid the foundation for later distance education efforts.

From the middle of the 1960s to the beginning of the 1980s, industry and commerce grew steadily, soon becoming the focal point of society in Chinese Taipei. During this period the government initiated numerous public enterprises, such as the "Ten Major Construction Projects", to strengthen the industrial infrastructure and provide many employment opportunities. This had a major influence on economic well being, and significantly increased the average income level within Chinese Taipei. As well as emphasizing economic development, the government heavily stressed the development of education. In fact, education and economic development were from the outset critically linked in the minds of policy makers. During this period the average level of education increased dramatically, and the literacy rate finally reached 90%. These changes spurred rapid economic growth, while commerce along with heavy and light industry became the most productive sectors of the economy, responsible for approximately 43% of the GNP. The proportion of the population working in the commercial and industrial sectors also increased dramatically, from 22% in 1961 to 41% in 1980. As a spin off to this growth, the need for skilled business managers also increased (Huang, 1993a). On the basis of these developments, educational policy makers upgraded supplementary education programs to create the first distance colleges which were collectively named the "Taiwan Provincial Taipei College of Business". This was not unlike fuelling the fire with more fire since this new institution fostered additional potential for economic development and kindled a strong desire for even more distance education during this period of accelerating change.

From 1980 until the present, all sectors of society in Chinese Taipei have felt the pressures associated with the need to continually restructure for economic progress in the face of demands made by the world marketplace. Although the internal economy remained the key focus for development, broader society, including the government and cultural sectors, entered a period of critical self-examination in order

to identify new ways of thinking, new ways of producing and competing, and new value systems that would enhance the overall growth and development within Chinese Taipei. Specifically, more openness and involvement were sought in politics, the economy, and education. As these were attained, the working class and middle class grew, as did their influence. The demand for access to higher education rose steadily in order to meet the needs of an increasingly affluent and questioning society. In concert with the development of the information age and global competition, it became apparent that the higher education institutions of the day, along with the college level distance education program described earlier, were not sufficient to meet the demands or standards now required by a strongly motivated and diverse population. In 1980, the urgent need for increased and open higher education for personal and professional growth resulted in plans developed by the Ministry of Education for a full-scale distance education university. After five years of research, including evaluation of open universities around the world, Chinese Taipei's highest institution of distance education - the National Open University, often referred to simply as the Open University - was established in 1986.

During the past ten years, Chinese Taipei's trade-oriented economy and the development of higher technologies have been significant factors fuelling the demand for higher education including distance education. This expansion of education has proceeded in concert with the many social changes which occurred during the three historical periods. As illustrated in *The Relationship Between the Background of Students at the National Open University and Social Structure in Taiwan* (Huang, 1993b), the relative importance of commerce within different geographical areas of Chinese Taipei was, in fact, critical to promoting greater participation in the National Open University. Also, broadly available new technology and lifestyle-related advertising further motivated people to aggressively seek flexible and diversified educational programming in order to take advantage of the opportunities associated with a modern and developed society.

In short, distance education in its first phase acted as a supplement in order to respond to the shortcomings of traditional or conventional education. But as broad educational consciousness was raised among the people, and the concept and benefits of lifelong learning became clearer, distance education has come to occupy a pivotal position within the educational infrastructure. In fact, it can be argued that the development and delivery of high quality lifelong learning opportunities of many types throughout Chinese Taipei will in the future be most directly related to the further development of distance education facilities. Is distance education the principal panacea for supporting economic growth and encouraging personal development? For Chinese Taipei, the answer may well be yes.

Distance Education Institutions

Distance education, defined as an education form that delivers teaching activities through correspondence or other forms of technology such as television and computers, had its origins more than thirty years ago when the China Correspondence School instructed students through learning packages delivered by correspondence. In 1966, when the Ministry of Education established the Taiwan Provincial

Taipei College of Business, television and radio were incorporated into the delivery methodologies, and face-to-face tutoring was used only as an auxiliary technique. These methods of distance delivery are described within Chinese Taipei as the "Four Links of Instruction for Distance Education." As suggested earlier in this paper, the Taiwan Provincial Taipei College of Business was established to support broad economic development by targeting education at the business and management sector. Though in retrospect the activities of this college may seem limited and almost superficial, its influence both in terms of human resources trained and the development of demand for distance education was considerable.

As Chinese Taipei continued to develop, and the general population gradually came to accept the notion that lifelong learning was directly linked to personal development and economic well being, the desirability of having university level distance education became widely accepted. Hence, the National Open University opened its doors in 1986 with a mandate that included "improving the quality of human resources and broadly raising the national level of culture and education" (see Cheng, 1995). Through 1996, the National Open University has graduated twelve-thousand adult students and countless more have benefited from the wide variety of educational programs broadcast by the university. Over the course of the past decade the university has focused on three broad distance education goals.

The first of these goals has been to deliver high quality education broadly throughout Chinese Taipei. More specifically, this has been an effort to enhance access, particularly for the disenfranchised or disadvantaged, including handicapped adults, adults in rural areas, and women.

The second goal has been to develop degree granting programs. When the National Open University was founded, it was permitted to grant diplomas only. After years of lobbying and negotiating with government and the legislative Yuan, regulations giving the university the right to confer undergraduate degrees were passed in 1994. During recent discussions, it was agreed that the National Open University will soon include a graduate school. The implications for those citizens who are unable to attend a traditional university are significant.

The third goal has been to increase the number of academic departments. The National Open University was originally established with just three academic departments. However, after years of program development work, since for a distance education institution it is not a matter of simply hiring faculty, three more departments have been added. Currently, the six academic departments include humanities, business, social science, living sciences, public administration, and management & information.

PARTICIPATION IN DISTANCE EDUCATION

Distance education in Chinese Taipei has proven to be a popular form of participating in the lifelong learning process. In addition, it is increasingly accepted that more educational opportunities help build prosperity for society in a broad sense, not just for the participants. For these reasons, research has been conducted to determine who participates in distance education, motivations for participating, and changes that are occurring in the distance education population. The following sum-

marizes some of the findings.

According to 1995 survey data collected by the National Open University, the male/female participation ratio is 30/70. Most students (65%) are 25 to 39 years of age. Interestingly, government employees comprise the largest single group (33%) of participants, with participants from the business sectors representing the second largest group (18%). These numbers clearly reflect the mix of programs and courses currently offered. Slightly more than half the students (51%) graduated from high school before entering the National Open University, and a large percentage of them (44%) were college graduates from either junior or senior colleges prior to admission.

Another recent study, based on responses from 1489 questionnaires and titled "Needs Assessment of Adult Students in the National Open University", describes National Open University participants as typically married, middle class, and with incomes slightly below the average (Huang, 1996). These students put a high value on lifelong learning, and consider learning and education useful for increasing their abilities to perform effectively on the job as well as for obtaining promotions. The reasons given for participating specifically in the National Open University's distance education programming include augmenting knowledge and skills, pursuing personal interests, raising personal educational levels, enjoying the social aspects associated with university, and increasing the chances for job promotion. These students expressed considerable satisfaction with their experience at the National Open University, and especially commented on increased self-confidence, the strong feelings of independence, and increased interest in learning.

Comparisons with Chinese Taipei's conventional higher education system are interesting. While the percentage of female students has increased from 43% in 1980 to 51% in 1994 in the conventional higher education system, the percentage of female students has increased from 61% in 1986 to 70% in 1995 at the National Open University. Similarly, in the Open Junior College system female participants represented 79% of the total student body in 1994. Clearly, the distance education approach is more attractive to women as reflected by their higher participation rates. Secondly, and perhaps more interestingly, women's participation in distance higher education is increasing at a faster rate than in the conventional system.

The age of distance education participants has also changed. When the National Open University first enroled students, 34% of the participants were 24 years of age or younger, 27% were 25 to 29 years of age, and 17% were between 35 and 39 years of age. These groups represented the three largest by age and accounted for almost 80% of the student body. By 1991 this distribution had changed considerably. The 25 to 29 years of age group became the largest, representing 26% of total participation, the 30 to 34 years of age group became the second largest, representing 20%, and those under 24 years of age comprised only the fourth largest group. The 1996 figures again show the 25 to 29 and 30 to 34 years of age groups as the two largest, but they are now almost the same size, each representing approximately 23% of the total student body. The percentage of students under the age of 24 continues to decrease. These data suggest a trend for increased participation from older adults and decreased participation from younger adults. Initially, participation in distance

education by young adults may have simply been a novel substitute for conventional universities (Huang, 1993a, 1993b, 1996).

Participants with business or trade related jobs, such as sales or international trade, were the largest group of students in 1986, and at this same time government employees were the second largest group. By 1996 these two groups had reversed themselves. During the same period, increased participation rates from the service sector, education, and the military were observed.

Overall, distance education and distance education learners in Chinese Taipei have changed radically during the past three decades, most notably with more women, more older adults, and more non-business sector workers participating. These changes are related at least in part to the new academic departments at the National Open University, particularly those such as health care which attract greater interest on the part of female participants. Other factors that are thought to have greatly influenced the makeup of the participants include the broad acceptance of the importance of learning through the lifespan as well as social change, economic development, the technical revolution, and the arrival of the information age. Given that the National Open University, the centrepiece for distance education in Chinese Taipei, is only ten years old, it is clear that more research needs to be conducted in order to determine how the institution can best respond to its mission and meet the needs of its stakeholders.

DEMAND FOR DISTANCE EDUCATION

The outlook for distance education and its role in Chinese Taipei is quite bright. Ten years ago, the notion of a wide-ranging university level distance education program was a dream. Now it is a reality, along with broad public support for distance education programming. According to a 1995 survey on distance education, 82% of the public who were questioned agreed that "Open University graduates are positively recognized by Chinese Taipei society." As well as the positive views among the general public, the fact that one third of Open University graduates has continued or returned for further education after graduation from the university speaks directly to the benefits received (see Huang, 1995).

A 1995 workforce survey found 17% of employees unable to find jobs appropriate for their training, 6% holding positions for which they were not trained, and 7% underpaid for the roles they performed (Executive Yuan, 1996). These groups, along with the growing portion of the population seeking to more broadly improve its employment options, suggest that the need for lifelong learning, adult education, and distance education in particular will continue to grow. For those who are currently working, distance education provides opportunities for skills upgrading in the areas in which they are currently employed, or to learn entirely new skills in anticipation of changing jobs. Distance education is particularly important for women, in part because within Chinese Taipei society there is a heavy obligation for women to stay at home when they have young children. It is not unusual for these women to be out of the workforce for as long as ten years, and keeping up-to-date through the traditional school system is not feasible. If they are interested in employment after their children become older, these women can take advantage of distance education

before they are actually ready to take a job. As well, there is increasing demand from senior citizens, the handicapped, members of the rural population, and those who are interested in pursuing knowledge for its own sake. Clearly the distance education market is diverse and vibrant. To have reached this stage in a mere ten years is astonishing.

POLICY ENVIRONMENT

The success of the distance education program and the Open University has given rise to a variety of policy reviews. These have focused on three prime areas: the issue of open entrance to higher education; the development of additional open universities; and competition in distance education from traditional universities.

Education policies are continuing to emphasize the need to ensure opportunities for all and avoid creating second class citizens for whom access to lifelong learning opportunities are restricted. In this regard, the system of entrance examinations is being questioned. In the past, all applicants to the National Open University were required to pass an entrance examination. On average, approximately 75% were successful, and the remainder were simply turned away. However, a recent decision by the Education Reform Committee has eliminated the entrance examination. Applicants are now required only to complete a registration form. The open entrance policy has certain weaknesses, such as having the potential to negatively affect the quality of courses or overwhelm the institution with large numbers of applicants; however, it has most certainly addressed the issue of access and opportunity. In general, it is felt that by opening access, the educational fabric of the society as a whole will be advantaged, and the economic output of the economy will increase. Thus, every member of society will, in the end, benefit.

Until recently, the National Open University had a monopoly on distance education throughout Chinese Taipei. However, the legislative Yuan recently passed a regulation designed to open the market for the establishment of new open universities. This change will give learners increased access to post-secondary distance education and is also expected to serve the secondary purpose of enhancing quality in education through competition. At this stage, the two largest cities in Chinese Taipei, Taipei and Kaohsiung, are in the process of establishing open universities. Since the National Open University and these two new universities will be competing with each other for students, improvements in student services, the quality of teaching, and the variety of subjects available is expected.

The obvious success of distance education has begun to attract the traditional universities into the distance education field. More of them are now beginning to implement distance education programming, in some cases with government support. Recently, several of these universities have begun experimenting with distance delivery tele-teaching through advanced technology computer systems and satellite communications.

Taken together, the government policies which have influenced open admissions, the creation of new open learning universities, and the involvement of traditional universities in distance delivery, have had the effect of multiplying the number and types of distance learning opportunities as well as increasing the qual-

ity of distance learning in Chinese Taipei. If past experience holds true, these opportunities will generate even more demand, which in turn will encourage the government and the institutions to create additional opportunities. The result is more people engaged in lifelong learning, a higher educational level being achieved within the society, increased production and economic growth, and, ultimately, a higher standard of living enjoyed by all.

CHALLENGES

Although the prospects for distance education in Chinese Taipei are justifiably promising, some problems do exist and must be resolved. This will require the cooperation of the institutions, government, administrators, faculty and students. For example, the distance education system spends a large portion of its budget on the development of textbooks and the production of instructional television and radio programs. To date there has been little cooperation among institutions in so far as sharing instructional materials or production costs. Typical of bureaucracies, this waste of money and time is frustrating for the faculty and students. Improvements could be made quite easily by simply coordinating development efforts among distance education institutions with similar needs, both domestically and overseas.

The target population for distance education is adults; however, instructional methods in distance education only rarely incorporate approaches typically believed to be the most appropriate for the teaching of adults. Andragogy, a term popularized by Knowles (1976), is the art and science of helping adults learn. It rests on four assumptions: adult learners are increasingly self-directed; experiential learning techniques have more meaning; learning should be applied; and learning should lead to increased competencies. Distance education has certain limitations, and the assumptions inherent in andragogy are difficult to incorporate. For example, developing and incorporating a learner's self-direction within a distance education program is very challenging. Beyond that, many adult learners and instructors continue to rely on methods that limit independence, critical thinking, and intellectual inquiry. Finally, performance evaluation is restricted by traditional examinations, and question-answer types of homework. More diverse and creative approaches, such as written project reports, are not often seen. If distance education is to fulfil its mission, more effective, adult-based delivery and evaluation tools must be incorporated.

More than 70% of present distance education course participants are "teacher dependent", that is they are most comfortable when they have at least some face-to-face, traditional contact with the teacher (Huang, 1996). It is difficult to reconcile this with adult education and learning autonomy, leading ultimately to self-directed lifelong learning. Self-direction and independence, however, are not easy to achieve for adults in Chinese Taipei, and the problem may have its roots in the educational foundations of the secondary school system and the passive nature of learning therein. The need for independent inquiry and critical thinking skills is growing within the workplace, and distance education programs need to foster and model these behaviours.

Although there is strong recognition of and support for graduates from the Open University, some areas of the economy continue to give preference to graduates

from conventional universities. Further, less than half (45%) of the graduates from the National Open University feel that their academic achievements are fully appreciated by their families or their employers (Li, 1996). This suggests that although distance education has made great inroads in Chinese Taipei, the belief that qualifications from the National Open University are second class persists. It is thought, though, that as distance education graduates demonstrate success in all walks of life, greater acceptance will be forthcoming.

Distance education first began as supplemental to the mainstream system of education, as a stop gap or backfiller. It provided some relief to those who needed a second chance, and gave an economic boost to the economy. Notwithstanding its humble and modest origins, distance education in Chinese Taipei is a critical component of today's educational platform, and perhaps the most important element in the lifelong learning infrastructure that will move the society ever forward in its quest for economic growth and an increased standard of living for all its citizens.

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